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Geo. R. Boyd left Washington August 21 for Denver and Fort Collins, Colo., where he will confer with R.L. Parshall and others regarding the work of the Bureau in that State. He will next go to Utah to discuss with L.M. Winsor and others the work in progress and planned. Before returning to Washington about September 15 he will inspect the supplemental irrigation work in the Dakotas and the farm operating efficiency investigations in Minnesota, Wisconsin, Michigan, and Ohio.

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An interesting check on the accuracy of water supply forecasts based primarily on snow surveys is related in a letter which J.C. Marr has received from the Engineers' Corps of the War Department. Using the bureau's reports, the Engineers' Corps estimate of run-off of the Columbia River at Riparia from April 1 to August 1, under normal conditions was 13 to 16 million acre-feet. The actual run-off was 13,961,000 acre-feet. The estimated peak flow of the Snake River at Cascade Locks was 400,000 cubic feet per second while the measured peak was 393,700 cubic feet per second.

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The twin furrow method of irrigation, which consists of running water in small shallow furrows one on each side of the crop row at a distance of about 6 inches from the plants, is showing to advantage over the usual method of running water in a single furrow midway between the rows. This is the conclusion of Leslie Bowen who is conducting irrigation experiments at the Scottsbluff, Neb., experiment station. Benefits from the twin furrow method are especially noticeable where small quantities of water are used.

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Colin A. Taylor reports that the test on an orchard in North Pomona to show the modifying influence of a cover crop on the "June drop", of small orange fruits was carried through the month. Thermographs in standard shelters 5 feet above the ground surface have recorded day temperatures 5 to 7 degrees lower in the cover-cropped area than in the clean cultivated area. Night temperatures were about the same on both plots.

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Tests are being conducted at Medford, Oregon, by R.B. Allyn, in an attempt to determine soil pressure resulting from soil moisture and its effect upon moisture absorption by heavy clay adobe soils. Preliminary studies are being made with air-dry and screened soil vibrated and tamped to a field volume weight condition. To get an idea of the maximum pressures developed and the corresponding effect on moisture absorption, the soil is enclosed in a cylinder 18-inches in diameter, 12 inches high, with 1/4 inch steel end plates held in place by 12 stay bolts running through the cylinder.

The moisture is supplied under 7-foot head from an overhead calibrated bottle and distributed by two horizontal rings of 1/4-inch perforated copper tubing. The water added is measured from the bottle and checked against the increased weight of the cylinder. The pressure is determined by means of a Goldbeck cell installed in the center of the cylinder with the pressure pipe and contact lead running through the top plate, the pressure being read on a bourdon gage at the instant sufficient air has been admitted to the cell to force its diaphragm away from an electrical contact, thus breaking the circuit through an ordinary flashlight. An attempt will be made to measure the variation in rate of moisture absorption under similar conditions but without volume restraint of the soil, and thus determine the effect of pressure. Finally, soil pressures under field conditions will be determined.

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In connection with the supplemental irrigation program in the drought area of South Dakota, Carl Rohwer made arrangements with the WPA and the Corson County Commissioners for their cooperation in drilling a test well on property belonging to Corson County. A well 53 feet deep had previously been dug on this land, the discharge of which July 1 was 20 gallons per minute. Because of the small flow it was decided to deepen the well. By the end of the month this well had been drilled to a depth of 283 feet. The first 100 feet of the well was in fine grained soft sandstone and the next 175 feet consisted of alternate layers of sandstone and shale. Some of these layers gave indication of good flows of water but in this area it is doubtful whether it will be profitable to drill to a depth greater than 100 feet.

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Dean C. Mückel completed preliminary topographic surveys on four tracts in South Dakota and drew maps showing contour lines at 6-inch intervals. On July 6 he conferred with the county extension agent at Rapid City, S. Dak., concerning supplemental irrigation possibilities in Pennington County. It was concluded that little could be done along this line until questions involving water rights were settled. Four days were spent at Martin, South Dakota, investigating irrigation possibilities and conferring with the Resettlement supervisor and the county extension agent.

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A new series of radio talks on irrigation subjects has been arranged by P.A. Ewing for the Department's portion of the Western Farm and Home Hour. These will be broadcast from San Francisco at 2-week intervals, over the blue network of the National Broadcasting Company. The first talk was given Wednesday July 21. The series will cover several months and will reach a large audience, as the Western Farm and Home Hour programs now go through stations as far east as Billings, Denver, and Albuquerque.

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During the latter part of July and the first part of August; Lewis A. Jones and Geo. P. Wolf, made estimates of the amount of CCC drainage maintenance work to be performed during the fiscal years 1938 and 1939 and prepared budgets to cover personnel, equipment and work operations for this period. In connection with the preparation of these estimates Mr. Wolf spent July 13 to 15 at Georgetown, Dela., July 23 to 27 at Lafayette, La., and from July 28 to August 2 at Milwaukee.

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L.A. Jones accompanied R.W. Carpenter of the Maryland Agricultural College, inspected CCC drainage maintenance projects of the five camps in Maryland and Delaware, August 17 to 19, and discussed the future work program.

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From August 11 to 14, John C. Cotton made an inspection trip of the CCC drainage research work being conducted by the Maryland and Delaware camps. On this trip all the research accomplishments up to the present time were reviewed and plans were made to conduct additional run-off and stream measurement studies.

C.H. Torreyson has resigned as drainage research engineer to accept employment as associate civil engineer in the Engineering Planning Section of the Tennessee Valley Authority.

The Central District Drainage Camps report the following work accomplishments in July for the thirty-four camps, 3,311,161 square yards clearing, using 23,337 man days; 1,767,558 cubic yards excavation and embankment work using 21,632 man-days; 36,385 lineal feet of tile reconditioning, requiring 4,099 man-days, and 10,441 man-days used on surveys, research, structures and other work. The commercial value of the month's work is estimated at \$429,000. The local cooperation was valued at \$92,000.

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Late in July L.G. Schoenleber planted cauliflower on Long Island, N.Y., in connection with a new fertilizer placement experiment. During the first week in August he also supervised the launching of a similar experiment with kale at Norfolk, Va.

At Auburn, Ala. many of the farmers attending a Farm Bureau meeting visited the tillage machinery laboratory. J.W. Randolph reports that cotton picking is underway on the Prattville Experiment plots.

Prof. Claude Culpin, of the University of Cambridge (England) visited S.W. McBirney at Davis, Calif.

H. L. Boyle, of the International Harvester Co., who has contributed considerable material to the Bureau tractor history compilation was in Washington the early part of August.

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A conference was held at Urbana, Ill., on August 2 and 3 to plan a new corn storage project which the Bureau is about to undertake in cooperation with the University of Illinois and Iowa State College. The conference was attended by the following:

Professors E.W. Lehmann, W. A. Foster and R. H. Reed of the Department of Agricultural Engineering; Dr. W. L. Burlison and Dr. G.H. Dugan, and Mr. Simmerl of the Agronomy Department, University of Illinois. Prof. J.B. Davidson and H.J. Barre of Iowa State College; W.B. Combs of the Bureau of Agricultural Economics and R.O. Snelling of the Bureau of Plant Industry; William MacArthur of the Agricultural Adjustment Administration; and Thayer Cleaver and C.K. Shedd and Wallace Ashby of the Bureau of Agricultural Engineering. Preliminary arrangements were made for the experimental storage of approximately 10,000 bushels of ear corn and 600 bushels of field shelled corn and for the study of 10 farm cribs in Illinois and 10 in Iowa.

A. D. Edgar spent the last week in July and the first two weeks in August in Northern Maine where he checked installation of instruments used in determining heat losses and condition of insulation panels in a potato house where the inside humidity is held at approximately 90 percent.

Mr. Edgar visited a number of new and remodeled potato storages with M. G. Huber, Extension Agricultural Engineer, R. C. Dolloff, County Agent leader, and Verne Beverly, County Agent. Mr. Edgar then went to Lansing, Mich., to arrange for studies of white potato storage in that State. Preliminary plans for this project had previously been made by Wallace Ashby with the Michigan Experiment Station and the Michigan Potato Growers Exchange.

Wilson P. Green is assisting in a transit test of 10 carloads of oranges shipped from Colton, Calif. to New York City. Tests will be made on the relative merits of full bunker icing of the refrigerated cars as compared with upper half bunker icing. Conductimeter readings will be taken to determine the relative insulating values of the walls of a steel car and a wooden car.

A study of farm fencing conditions and new trends in fence construction is being made by M.A.R. Kelley. In this study he has made a field trip through the Carolinas and Georgia, thence west to Texas and is now on his way north through the middle west.

W. V. Hukill is at Athens, Ga., where he is assisting J.W. Simons in studies of farmhouse comfort. Four one-room buildings for experimental use were completed in June by the Bureau and two buildings similar in plan but constructed of other materials are now being completed by the University of Georgia. To broaden the range of observation the Bureau is now constructing an experimental unit which will be chiefly below the ground. Tests of effect of ceiling height and window and door areas and locations are being carried on in the three-room building constructed by the University of Georgia last year.

The remodeling of the Ronald Dougan home at Beloit, Wis., has been started. Max J. LaRock is cooperating in the preparation of the plans for the remodeling after having made temperature studies in the old structure during the winter. Miss Florence Poyner is assisting Mr. LaRock in obtaining information on the time required to cook standard meals and perform household tasks in the remodeled house. Information is also being obtained on the effect of housing conditions upon the family standards of living.

Work on the wheat storage project is proceeding well although no results from this year's tests are as yet available. C. F. Kelly reports that the filling of the experimental bins at Fargo commenced on August 14. The State Mill and Elevator of North Dakota is furnishing the wheat.

Selection of farmers' bins in the Urbana, Toledo, and Baltimore areas was much more successful than last year when drought eliminated the normal storage problems.

E.M. Dieffenbach of the Mechanical Equipment Division is representing the Bureau in the selection of the bins in the Toledo area with the cooperation of H. F. Prue of the Grain Division, Bureau of Agricultural Economics, Prof. R. C. Miller of Ohio State Univ., and Prof. C.F. Jefferson of Michigan State College.

Geo. J. Burkhart of the University of Maryland is working with Mr. Stahl of this Bureau and Mr. Anderson of the Grain Division, Bureau of Agricultural Economics in the selection of bins in Maryland.